Programme Specifications

B.Voc. Programme

Programme: Post-Harvest Technology	Faculty Faculty of Engineering and Technology

Directorate of Training and Lifelong Learning

M.S. Ramaiah University of Applied Sciences

University House, New BEL Road, MSR Nagar, Bangalore – 560 054

www.msruas.ac.in

1.	Title of the Awards	
		Vocational Diploma in Post-Harvest Technology
		Vocational Advanced Diploma in Post-Harvest Technology
		Bachelor of Vocational Degree in Post-Harvest Technology
2.	Modes of Study	
		Full-Time
3.	Awarding Institution /Body	
		Ramaiah University Of Applied Sciences – Bangalore, India
4.	Joint Award	
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5.	Teaching Institution	
		Directorate of Training and Lifelong Learning
		Ramaiah University of Applied Sciences - Bangalore, India
6.	Date of Course Specifications	
		Feb 2019
7.	Date of Course Approval by the Training and Lifelong Learning Council of RUAS	
		March 2019
8.	Course Benchmark	
		UGC Guidelines
9.	Rationale for the Course	
10.	Course Aim	
	The aim of the course is to develop skilled professionals in Post - Harvest Technology.	
11.	Course Objectives	
	The objectives of the course are:	

The objectives of the course are:

1. To impart knowledge on general education including physics, mathematics, electrical, electronics and computer applications

2. To impart knowledge on fundamentals and advancements in food engineering and technology

3. To repair and maintain various types of food processing machines

<table>
<tr><td></td><td colspan="3">4. To impart knowledge on Mechanical, electronics and electrical systems and designs involved in food processing machines

5. To impart knowledge on managerial subjects and general subjects like principles of management, customer relationship, operations management, behavioral skills, communication skills for successful operation of any business

6. To create awareness on new technologies and trends in Post - Harvest technologies</td></tr>
<tr><td></td><td colspan="3"></td></tr>
<tr><td>12.</td><td colspan="3">Intended Learning Outcomes of the Course</td></tr>
<tr><td></td><td colspan="3">The Intended Learning Outcomes (ILOs) are listed under three headings:

1. Knowledge and Understanding 2. Practical Skills and 3. Capability/Transferable Skills.</td></tr>
<tr><td></td><td>12.1</td><td colspan="2">Knowledge and Understanding</td></tr>
<tr><td></td><td></td><td colspan="2">After undergoing this course students will be able to:

1. To understand various mechanical, electronics and electrical systems present in food processing machines.

2. To understand the concepts of food processing.

3. Read and interpret various safety regulations, labor laws connected with industries.</td></tr>
<tr><td></td><td>12.2</td><td colspan="2">Practical Skills</td></tr>
<tr><td></td><td></td><td colspan="2"></td></tr>
<tr><td></td><td></td><td>1.</td><td>Identify various food processing machines and their applications.</td></tr>
<tr><td></td><td></td><td>2.</td><td>Read mechanical & electrical drawings and interpret</td></tr>
<tr><td></td><td>12.3</td><td colspan="2">Capability/Transferable Skills</td></tr>
<tr><td></td><td></td><td colspan="2">After undergoing this course, the student will be able to :</td></tr>
<tr><td></td><td></td><td colspan="2"></td></tr>
<tr><td></td><td></td><td>1.</td><td>Manage operations in food processing industry</td></tr>
<tr><td></td><td></td><td>2.</td><td>Communicate effectively</td></tr>
<tr><td></td><td></td><td>3.</td><td>Effectively Deal with customers</td></tr>
<tr><td></td><td></td><td>4.</td><td>Build team and manage team</td></tr>
<tr><td>13.</td><td colspan="3">Course Structure</td></tr>
<tr><td></td><td colspan="3">A student is required to successfully complete the following modules for the award of the degree. The course is delivered as per the Time-Table for every batch.</td></tr>
</table>

Vocational Diploma

Semester-1

<table>
<tr><td colspan="5" align="center">General Education: 12 Credits, 180 Hours</td></tr>
<tr><td>S. No.</td><td>Code</td><td>Module Title</td><td>Credit</td><td>Hours</td></tr>
<tr><td>1</td><td>VGE057</td><td>Physics</td><td>4</td><td>60</td></tr>
<tr><td>2</td><td>VGE069</td><td>Mathematics & Statistics</td><td>4</td><td>60</td></tr>
<tr><td>3</td><td>VGE072</td><td>Bio - Chemistry</td><td>4</td><td>60</td></tr>
<tr><td colspan="5" align="center">Vocational Education: 18 Credits, 270 Hours</td></tr>
<tr><td>S. No.</td><td>Code</td><td>Module Title</td><td>Credit</td><td>Hours</td></tr>
<tr><td>1</td><td>VPT001</td><td>Basic Workshop Practices (Fitting, Sheet metal, Welding, Rolling, Bending)</td><td>6</td><td>90</td></tr>
<tr><td>2</td><td>VPT002</td><td>Computer Application</td><td>6</td><td>90</td></tr>
<tr><td>3</td><td>VPT003</td><td>Engineering Drawing</td><td>6</td><td>90</td></tr>
</table>

Semester-2

<table>
<tr><td colspan="5" align="center">General Education: 12 Credits, 180 Hours</td></tr>
<tr><td>S. No.</td><td>Code</td><td>Module Title</td><td>Credit</td><td>Hours</td></tr>
<tr><td>1</td><td>VGE008</td><td>Basic Electrical Systems</td><td>4</td><td>60</td></tr>
<tr><td>2</td><td>VGE039</td><td>General Communication - English</td><td>4</td><td>60</td></tr>
<tr><td>3</td><td>VGE030</td><td>Engineering Materials</td><td>4</td><td>60</td></tr>
<tr><td colspan="5" align="center">Vocational Education: 18 Credits, 270 Hours</td></tr>
<tr><td>S. No.</td><td>Code</td><td>Module Title</td><td>Credit</td><td>Hours</td></tr>
<tr><td>1</td><td>VPT004</td><td>Introduction to Food & Grain Technology</td><td>6</td><td>90</td></tr>
<tr><td>2</td><td>VPT005</td><td>Turning & Milling Operations</td><td>6</td><td>90</td></tr>
<tr><td>3</td><td>VPT006</td><td>Metrology, GD & T Measurements</td><td>6</td><td>90</td></tr>
</table>

VMT – Vocational Machine Tool

Vocational Advanced Diploma

Semester-1

General Education: 12 Credits, 180 Hours				
S. No.	**Code**	**Module Title**	**Credit**	**Hours**
1	VGE009	Basic Electronic Circuits	4	60
2	VGE011	Basics of Hydraulics & Pneumatics	4	60
3	VGE070	Elements of Mechanical Design	4	60
Vocational Education: 18 Credits, 270 Hours				
S. No.	**Code**	**Module Title**	**Credit**	**Hours**
1	VPT007	Fundamentals of Food Engineering	6	90
2	VPT008	Inspection & Quality Control	6	90
3	VPT009	Machine Drawing and 3D Modeling	6	90

Semester-2

General Education: 12 Credits, 180 Hours				
S. No.	**Code**	**Module Title**	**Credit**	**Hours**
1	VGE028	Elements of Mechatronics	4	60
2	VGE063	Sensors & Signals	4	60
3	VGE059	Principles of Management	4	60
Vocational Education: 18 Credits, 270 Hours				
S. No.	**Code**	**Module Title**	**Credit**	**Hours**
1	VPT010	Food Processing Engineering - 1	6	90
2	VPT011	Electrical & Electronics Systems Simulation & Analysis	6	90
3	VPT012	Project 1	6	90

Vocational Degree

Semester-1

General Education: 12 Credits, 180 Hours

S. No.	Code	Module Title	Credit	Hours
**General Education: 12 Credits, 180 Hours**
1	VGE023	Customer Relationship Management	4	60
2	VGE013	Business Communication English	4	60
3	VGE071	Industrial Automation	4	60
**Vocational Education: 18 Credits, 270 Hours**
S. No.	Code	Module Title	Credit	Hours
1	VPT013	Food Processing Engineering - 2	6	90
2	VPT014	PLC & Its Applications	6	90
3	VPT015	New Product Development	6	90

Vocational Degree

Semester-2

S. No.	Code	Module Title	Credit	Hours
**General Education: 12 Credits, 180 Hours**
1	VGE054	Operations Management (include estimation & costing)	4	60
2	VGE041	Good Shop Floor Practices	4	60
3	VGE047	Labor laws, Occupational Health and Safety	4	60
**Vocational Education: 18 Credits, 270 Hours**
S. No.	Code	Module Title	Credit	Hours
1	VPT016	Emerging Technologies in Food Processing	6	90
2	VPT017	Seminars & Presentations	2	30
3	VPT018	Project Work - 2	10	150

14. **Delivery Structure**

The course is in a semester pattern with an average of 30 hours of interactions per week and 15 weeks per semester

15. **Teaching and Learning Methods**

The module delivery comprises of a combination of few or all of the following:
1. Face to Face Lectures using Audio-Visuals
2. Demonstrations
3. Laboratory/Field work/Workshop
4. Industry Visit
5. Group Exercises
6. Project Exhibitions
7. Technical Festivals

16. **Assessment and Grading**

Each module is assessed for a total of 100 marks with two tests each of 25 marks and a final examination of 50 marks for general education modules and similar pattern is followed for vocational based modules with emphasis on skills. A candidate is required to score a minimum of 40% overall in each of the modules.

17. **Failure**

If a student fails in a module, he/she is required to take up the make-up examination.

18. **Attendance**

A student is required to have a minimum attendance of 75% in each of the modules.

19. **Award of Class**

As per the Academic Regulations for Vocational Programme.

20. **Student Support for Learning**

Student are given the following support:

1. Module notes
2. Reference books in the library
3. Magazines and Journals
4. Internet facility
5. Computing facility
6. Laboratory facility
7. Workshop facility
8. Staff support
9. Lounges for discussions
10. Any other support that enhances their learning

21.   Quality Control Measures

Following are the Quality Control Measures:

1. Review of module notes
2. Review of question papers
3. Student feedback
4. Opportunities for the students to see their assessed work
5. Staff student consultative committee meetings
6. Student exit feedback
7. Subject Assessment Board
8. Programme Assessment Board

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